US Army Corps of Engineers®
Walla Walla District

Welcome To

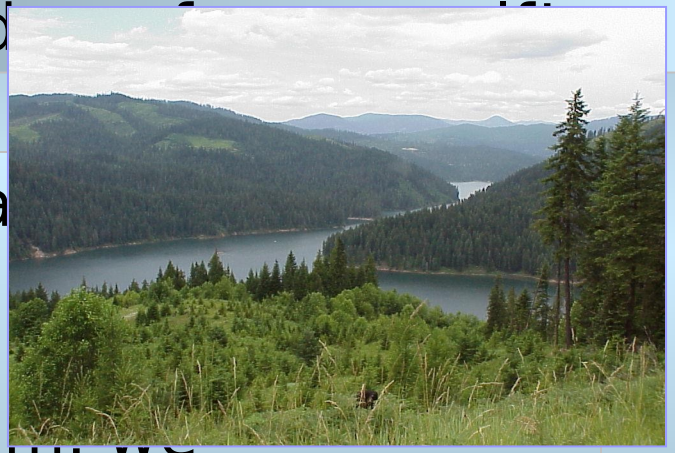
The U.S. Army Corps of Engineers Dworshak Dam and Reservoir

Virtual Tour Program

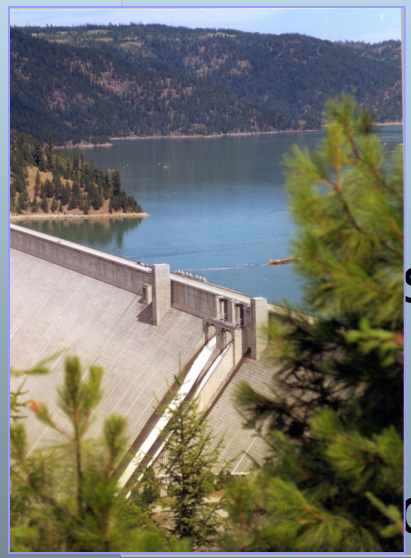
Visitor Center

Wonderful World of Water Safety!
Wear a life jacket.
Alcohol and water don't mix.
Test all safety equipment.
Ease into cold water.
Remember boat lights at night.
Swim with a buddy.
Avoid strong current and turbulent water.
Follow all boating "rules of the road."
Every accident is preventable.
Think water safety.
You are important!
What should I take on the boat?
Can you keep the boat from floating away?
STOP

HELLO! I am your tour guide today, and on behalf of the U.S. Army Corps of Engineers, I'd like to welcome you to Dworshak Dam and Reservoir. There's so much to see and do here, we hope you can come on out and

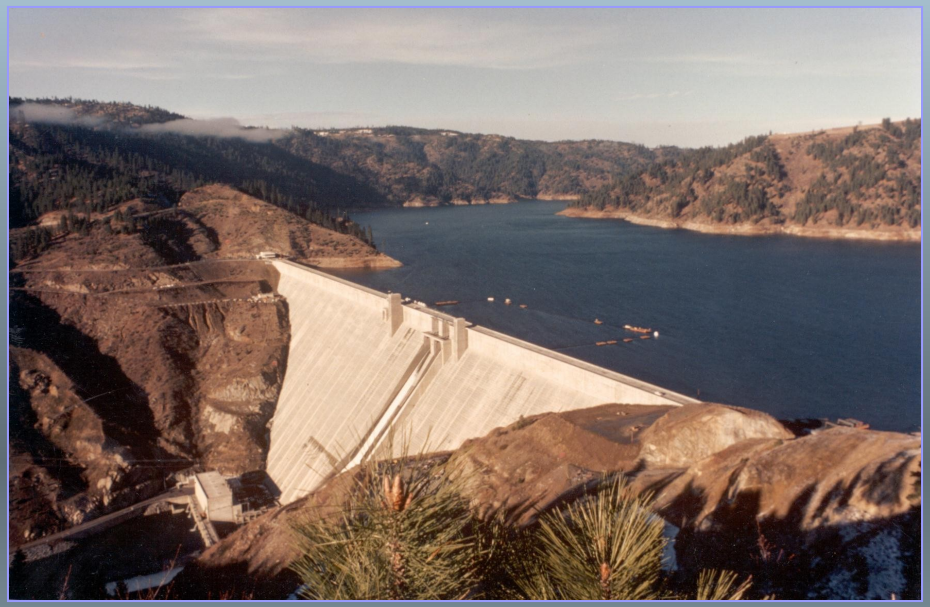


For now, we are going to emba
on a virtual journey through
Dworshak Dam. As we walk
through the da..., we
are going to tell you a
about why it was built, how it
structed, what some of the benefits
what you are seeing as
ong. But first, some interesting
out the dam...



The Dam

- Highest straight-axis concrete gravity dam and the third tallest in the United States
- 717 feet high, 13 million tons of concrete
- 3/4 of a mile long



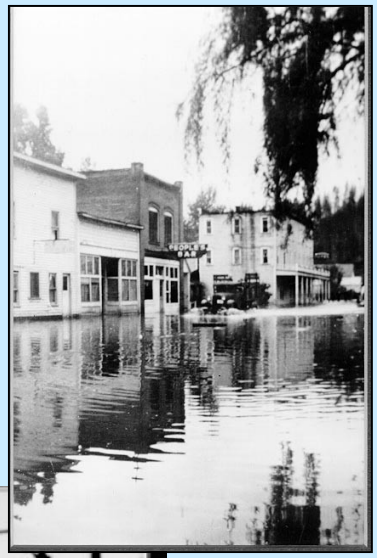
- 54 mile long reservoir
- 3.5 million acre-feet of water storage
- 2 million megawatt hours of electricity produced annually

The 1603 Gallery

You are now about to walk through the dam inside the 1603 gallery. It is 1603 feet above mean sea level. This gallery runs the entire length of the dam (3/4 of a

Why We Were Built

Flood Control



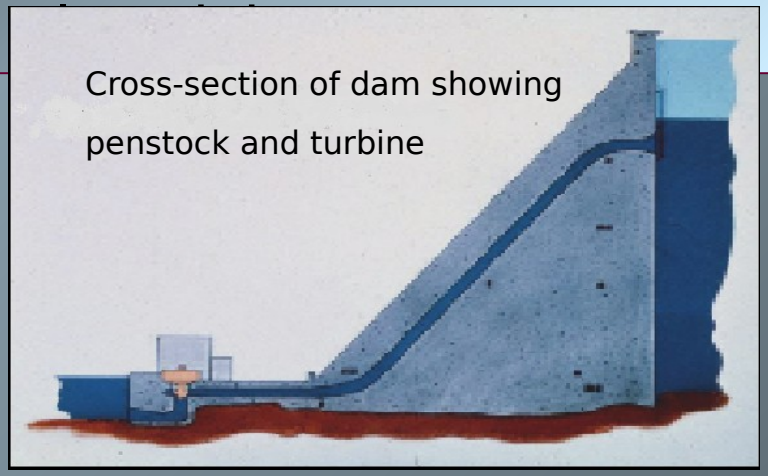
Flood Control is one of Dworshak Dam's primary functions. In the 50 years before construction, the river flooded 38 times, affecting downstream communities almost every other year. Dworshak has saved millions of dollars in cumulative flood damage reduction!

Hydropower

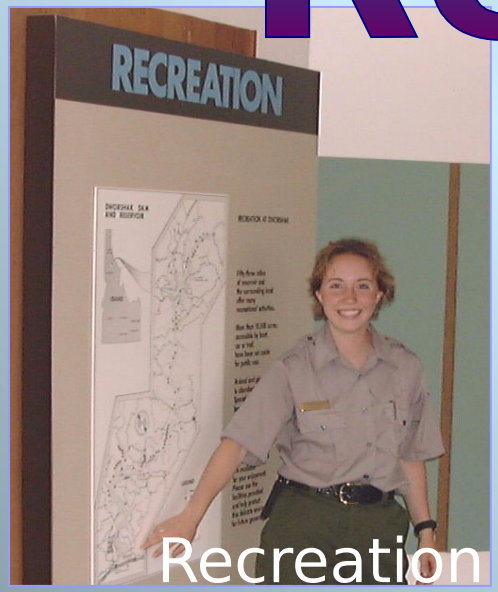
Hydropower

Hydroelectric power production is another important function of Dworshak Dam. Three large pipes, or penstocks, channel water from the reservoir to turbines in the powerhouse. This powerful release of water moves the turbines connected to Dworshak's generators, thus producing

Penstocks

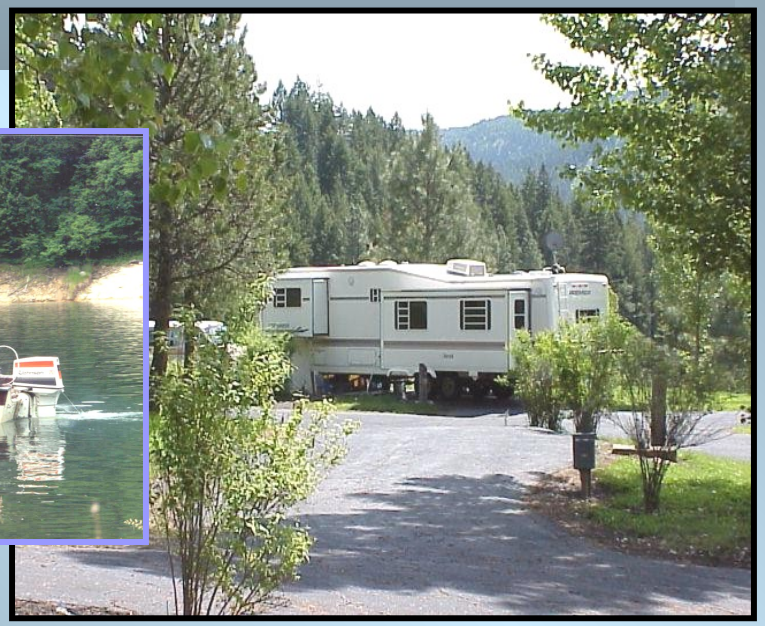


Recreation



Recreation

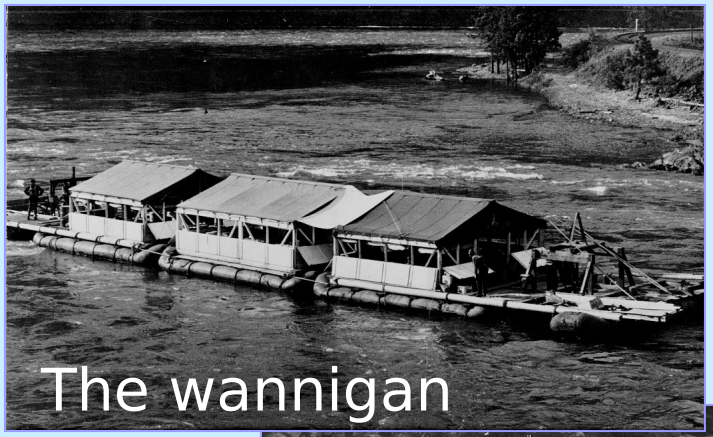
Dworshak Reservoir is 54 miles long and covers 19,000 acres. In addition to this, the Corps manages 30,000 acres of land around the reservoir, which provides for various outdoor recreation opportunities such as boating, fishing, hiking, camping, hunting, and swimming.



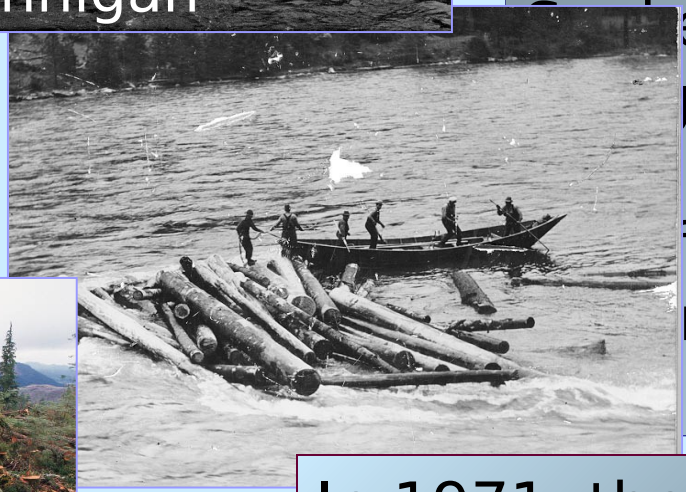
Fish and Wildlife

The Corps of Engineers is a steward to nearly 12 million acres of public land and water. At Dworshak, we manage approximately 49,000 acres for fish and wildlife benefits. This involves maximizing public use benefits, while meeting historic mitigation obligations and protecting delicate ecosystems.

Navigation



The wannigan



Most people are surprised to hear that navigation was another purpose for Dworshak. The Clearwater was never a working navigable river like the Lower e or the Columbia. For gation purposes, it was in one way: to carry rom the forests in the r North Fork region to in Lewiston.

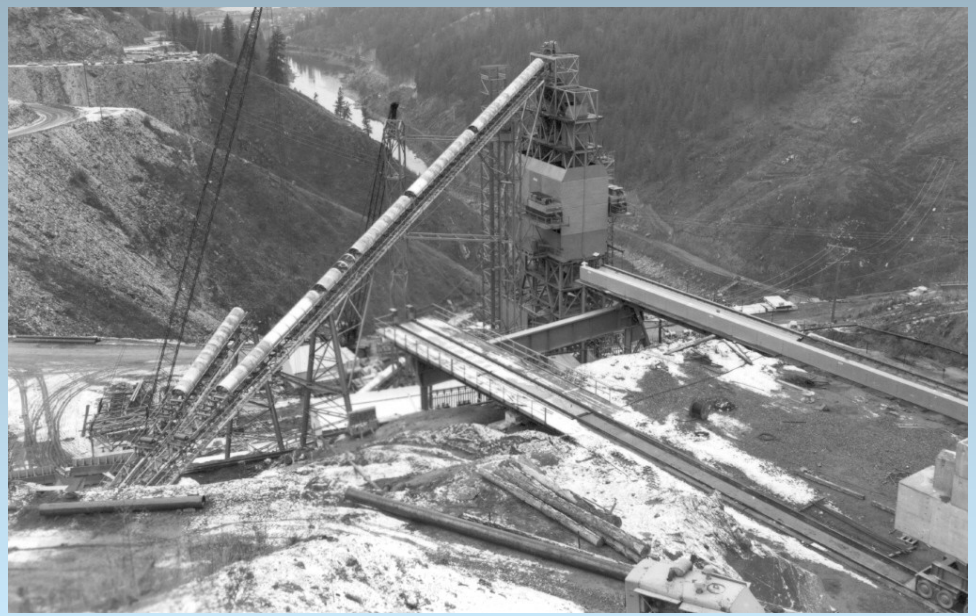
In 1971, the Clearwater was the scene of the last log drive in this country. After the dam was built, logs were extracted at Bruce's Eddy and trucked to the mills.

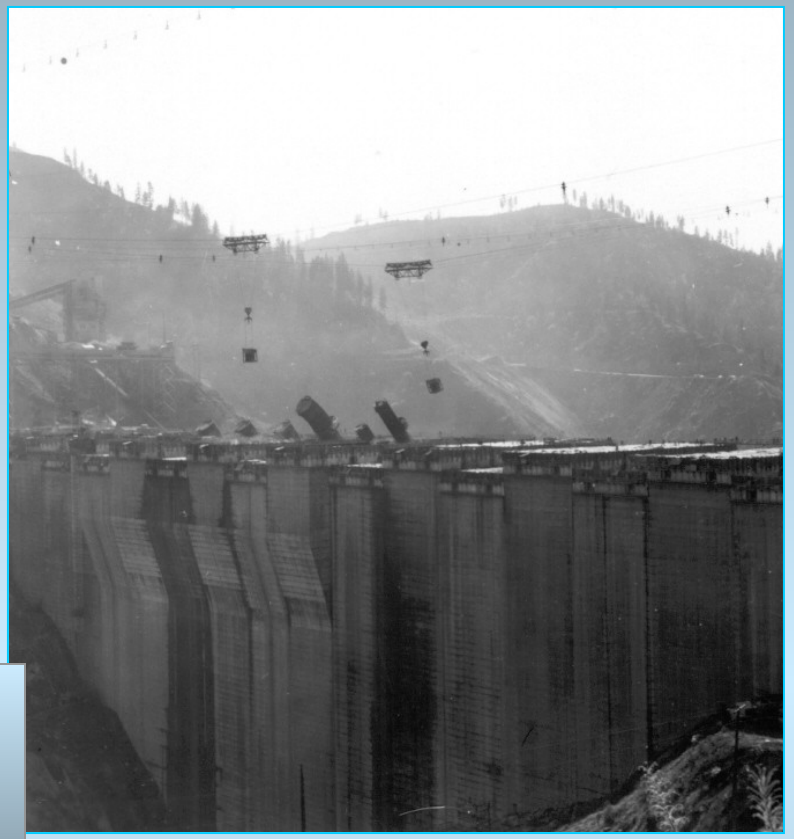
The North Tower

Constructio
n Model

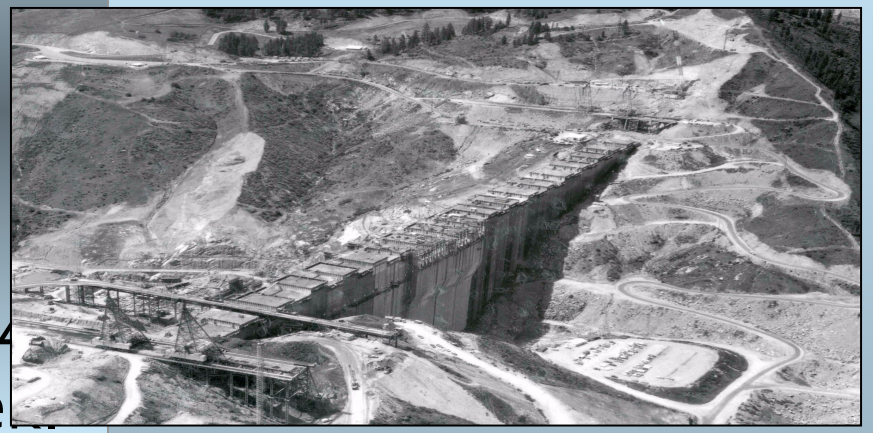
Dam construction started in 1966 and ended in 1973. The first task was to divert the river to allow work on the bedrock. A 1700-foot long diversion tunnel was

the



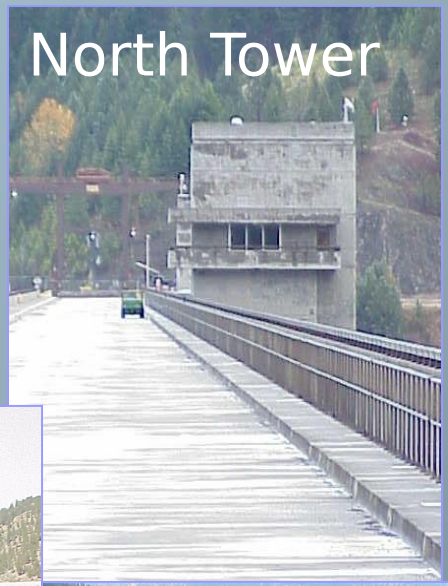


Rock aggregate was quarried, crushed and mixed into concrete onsite. A cableway system allowed concrete to be poured at any desired location. The dam was built in five foot lifts in 51 monolith blocks. Pouring took place for four and a half years, 24 hours per day, seven days a week.



The North Tower

Looking downstream from the North Tower balcony, you can see the powerhouse, North Fork of the Clearwater River, and the rock quarry. Thirteen million tons of high quality rock was blasted from the hillside t
aggregate for the dam.

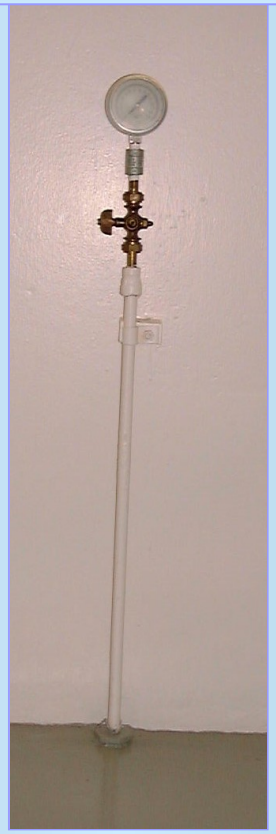


Inside the Quarry

The 1005 Gallery

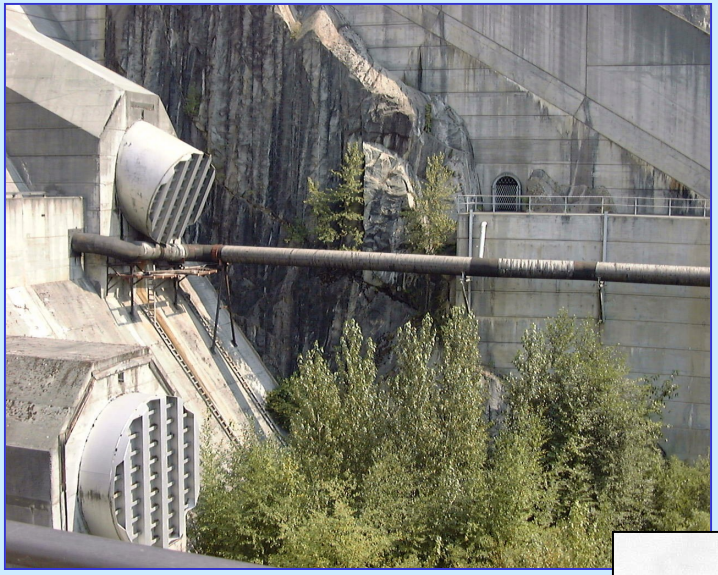
This gallery at the base of the dam leads out to the powerhouse. Only twenty-five feet of concrete separates visitors from the reservoir.

Right: Gauges like this measure water pressure below the dam, near the bedrock.

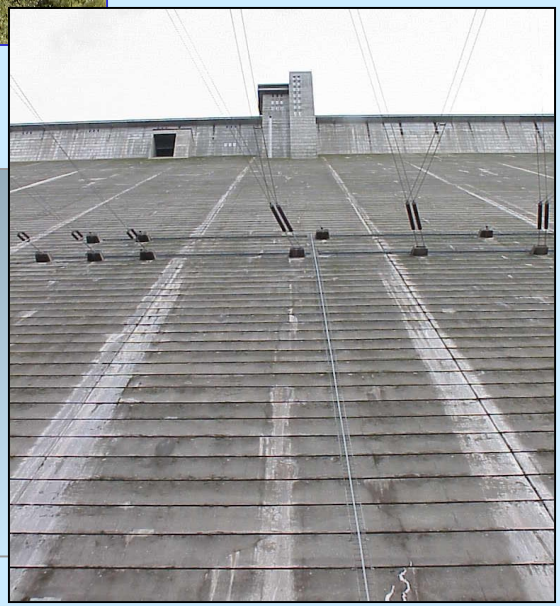


Below: Part of 7.5 miles of passageways, this gallery provides access within the

The Skeleton Bay



Looking to the future, three extra penstocks were built to provide for additional power generating capacity. Each of these nineteen-foot diameter penstocks is large enough to park a school bus in!



Right: An impressive view of the dam looking up from the base.

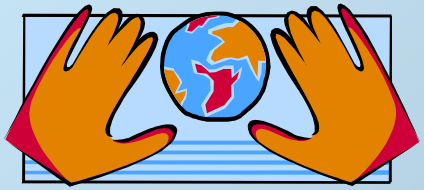
The Powerhouse

Inside the powerhouse, operators work in the control room 24 hours a day. They control the generators and monitor proje operations. Th three generators are loc in the assembly bay. One can produce 220 megawatts, and the other two can produce 90 megawatts each.

Control Room

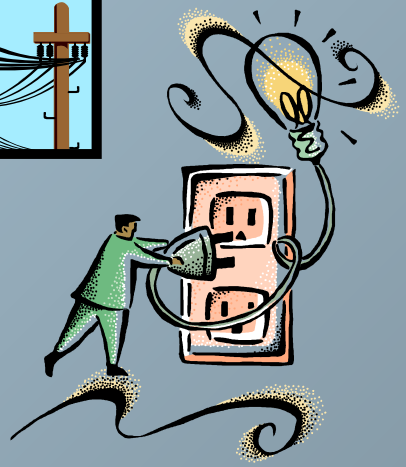
Assembly Bay

Hydropower



At a time when energy alternatives are being examined, hydropower generation continues to be the only pollution-free, renewable form of commercial energy production.

Approximately two million mega-watt hours are produced annually at Dworshak, yielding a capacity of $50 million in annual revenues. The Bonneville Power Administration markets the power produced for distribution to homes and industries throughout the Pacific Northwest and California.



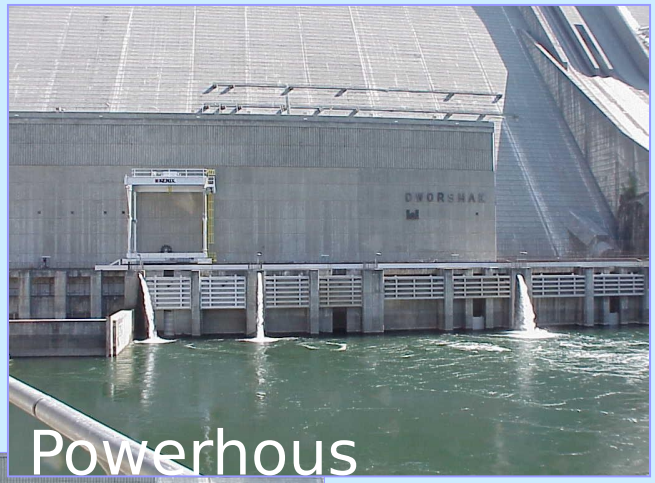
The Spillway

Sometimes you may see water flowing through the gates of the spillway. The spillway holds back, or releases extra water. Water is spilled mainly in the summer to help juvenile salmon return to the ocean, and to pass river flow in excess of the hydroelectric capacity of the power house. This is one of the many ways

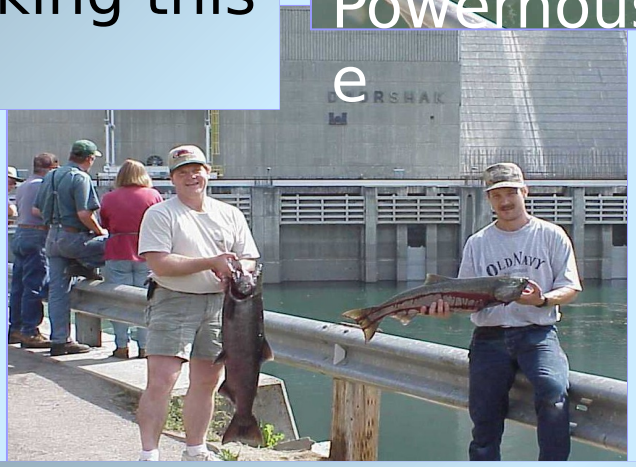
The reservoir level varies throughout the year so that the dam can do its job of flood while producing hydropower, providing recreation, and minimizing negative impacts on wildlife.

The Tailrace

The tailrace area below the powerhouse is where water exits the dam after going through the generators. Chinook Salmon and Steelhead are attracted to the water flowing out of Dworshak, making this a popular fishing spot.



Powerhouse



Tailrace

Left: All three generators are in operation and producing power. Water used to cool the generators flows out of the pipes, into the river.

Fish Catch Pen

Feeding the fish

Dworshak Dam blocked the native Steelhead runs. Dworshak National Fish Hatchery was built to mitigate for these losses. The hatchery raises over two million juvenile fish each year.

For six years following dam construction, fish attempting to migrate up the North Fork were collected in a catch pen at the dam and transported to the hatchery. Today, the fish return to the hatchery where they were born.

Catch Pen

The Walk Back

4 city blocks = half the length of Dworshak

Wheelchairs, strollers, as well as an electric cart are available for public use.

Thank you for joining us!

I hope you enjoyed your virtual journey through the dam with us today. We would love to meet you in person. There is so much more to learn about Dworshak, so bring your friends and family on up and see for yourself!

If you would like more information about Dworshak Dam and Reservoir, call 208-476-1255 or visit the worldwide web at http://www.nww.usace.army.mil/corpsoutdoors/